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## Diffuse Lung Disease

**TOPIC:** Diffuse Lung Disease

**TYPE:** Medical Student/Resident Case Reports

### THINKING BEYOND COVID-19: A CASE OF KRATOM-INDUCED PNEUMONITIS

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**INTRODUCTION:** Kratom is an herbal supplement derived from a tree that grows in tropical climates. It has gained popularity as an over the counter analgesic for managing pain and treating symptoms of opioid withdrawal. There is limited data on both the efficacy and safety of Kratom with an increasing number of reports now linked to adverse effects. We present a patient with Kratom ingestion who developed acute respiratory failure secondary to Kratom-induced pneumonitis.

**CASE PRESENTATION:** A 69-year-old female with a history of breast cancer and chronic back pain being treated with Kratom presented with worsening shortness of breath. Patient was hypoxic requiring non-invasive ventilation. She quickly progressed to acute respiratory distress syndrome (ARDS). Computed tomography (CT) of the chest showed diffuse ground glass opacities with superimposed consolidations concerning for pneumonitis. Infectious and autoimmune workup was unrevealing. COVID-19 PCR testing was negative on three separate occasions. The patient was then suspected to have Kratom-induced pneumonitis and empirically treated with intravenous steroids. Within seven days she improved from a PaO<sub>2</sub>/FiO<sub>2</sub> ratio of 70 to an oxygen saturation of 98% on room air at rest. At 5 month follow up, she had near complete resolution of radiographic disease on CT.

**DISCUSSION:** Our patient had been utilizing Kratom as a self-prescribed alternative to opioid therapy for chronic back pain. Although illegal in some regions of the United States, Kratom is easily accessible for purchase in stores and over the internet. It is marketed as treatment for opioid addiction, to aide in withdrawal symptoms, and as a safe substitute for narcotics in management of acute and chronic pain. However, there have been no Food and Drug Administration (FDA) approved indications for this supplement. The FDA recently issued several warnings about Kratom's possible ill-effects. There is increasing evidence that Kratom use is associated with nausea, vomiting, liver disease, hallucinations, and seizures. From 2011-2017, there were 1800 calls to poison control centers regarding Kratom. Despite this, literature review reveals very few case reports of Kratom-induced lung injury. Considering Kratom's increasing mainstream appeal due to affordability and ease of public access, health care providers should be diligent in obtaining complete histories from patients with respiratory failure, including supplement ingestion. Prompt and early administration of steroids in these cases may lead to rapid improvement in clinical condition, thus sparing patients from intubation and unnecessary invasive diagnostic procedures.

**CONCLUSIONS:** This case presentation suggests Kratom use as an emerging cause of drug-induced pneumonitis and ARDS. The medical community would benefit from awareness of its increasingly popularity and adverse effects.

**REFERENCE #1:** Warner, M.L., Kaufman, N.C. & Grundmann, O. The pharmacology and toxicology of kratom: from traditional herb to drug of abuse. *Int J Legal Med* 130, 127-138 (2016). <https://doi.org/10.1007/s00414-015-1279-y>

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